

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-12. (Canceled)

Claim 13. (Currently Amended) ~~The method of claim 12 further comprising the preliminary steps:~~

A method for polling and scheduling in a multiuser network that includes a plurality of bandwidth efficient modems configured to carry out a distributed coordination function (DCF) for providing best-effort delivery of asynchronous packet data, the method comprising:

each modem detecting that one or more of the other modems included in the network are bandwidth efficient and therefore capable of an aggressive access protocol that exploits co-channel demodulation capabilities; ~~and~~

switching from a legacy protocol mode to the bandwidth efficient aggressive access protocol mode for at least one pair of communicating modems included in the network ;

two or more modems simultaneously transmitting on a single channel requests-to-send (RTS) messages to a first set of destination modems;

simultaneously receiving clear-to-send (CTS) messages from the first set of destination modems at each of the requesting-to-send modems;

recovering each corresponding CTS message using co-channel demodulation capabilities of the corresponding requesting modem;

each requesting modem simultaneously transmitting its respective data on to the network;
and

each corresponding destination modem recovering the corresponding data using its co-channel demodulation capabilities.

Claim 14. (Currently Amended) The method of claim ~~12~~ 13 comprising:
each modem adaptively learning modes of operation which each particular modem in the
network is capable; ~~and~~
~~storing the learned modes operation.~~

Claim 15. (Currently Amended) ~~The method of claim 14~~

A method for polling and scheduling in a multiuser network that includes a
plurality of bandwidth efficient modems configured to carry out a distributed coordination
function (DCF) for providing best-effort delivery of asynchronous packet data, the method
comprising:

two or more terminals simultaneously transmitting on a single channel requests-to-send
(RTS) messages to a first set of destination modems;
simultaneously receiving clear-to-send (CTS) messages from the first set of destination
modems at each of the requesting-to-send modems;
recovering each corresponding CTS message using co-channel demodulation capabilities
of the corresponding requesting modem;
each requesting modem simultaneously transmitting its respective data on to the network;
each corresponding destination modem recovering the corresponding data using its co-
channel demodulation capabilities;
each modem adaptively learning modes of operation of which each particular modem in
the network is capable; and
storing the learned modes of operation,

wherein the learned modes of operation include a legacy protocol mode and a bandwidth
efficient aggressive access protocol mode that exploits co-channel demodulation capabilities. .

Claim 16. (Currently Amended) The method of claim ~~12~~ 13 further comprising:
repeating the steps of simultaneously transmitting requests-to-send (RTS) messages,
simultaneously receiving clear-to-send (CTS) messages, recovering each
corresponding CTS message, simultaneously transmitting respective data on to
the network, and recovering the corresponding data for one or more next sets of
destination modems.

Claims 17-24. (Canceled)

Claim 25 (New) The method of claim 14 further comprising:

storing the learned modes of operation.

Claim 26 (New) The method of claim 14 further comprising:
repeating the steps of simultaneously transmitting requests-to-send (RTS) messages,
simultaneously receiving clear-to-send (CTS) messages, recovering each
corresponding CTS message, simultaneously transmitting respective data on to
the network, and recovering the corresponding data for one or more next sets of
destination modems.

Claim 27 (New) The method of claim 15 further comprising:
repeating the steps of simultaneously transmitting requests-to-send (RTS) messages,
simultaneously receiving clear-to-send (CTS) messages, recovering each
corresponding CTS message, simultaneously transmitting respective data on to
the network, and recovering the corresponding data for one or more next sets of
destination modems.

Claim 28 (New) The method of claim 25 further comprising:
repeating the steps of simultaneously transmitting requests-to-send (RTS) messages,
simultaneously receiving clear-to-send (CTS) messages, recovering each
corresponding CTS message, simultaneously transmitting respective data on to
the network, and recovering the corresponding data for one or more next sets of
destination modems.